

OSPREY  
(PANDION HALIAETUS)

MONITORING AND BANDING AT  
BACK BAY NATIONAL WILDLIFE REFUGE  
FALSE CAPE STATE PARK  
1989-2002

BY

REESE F. LUKEI, JR.

U.S. FISH AND WILDLIFE SERVICE VOLUNTEER AND  
RESEARCH ASSOCIATE AT  
THE CENTER FOR CONSERVATION BIOLOGY  
COLLEGE OF WILLIAM AND MARY

PRESENTED AT  
BACK BAY FORUM 2005  
MARCH 16, 2005  
THE BACK BAY RESTORATION FOUNDATION

Reese F. Lukei, Jr.  
1046 Azalea Court  
Virginia Beach, Virginia 23452  
757-340-5948

OSPREY  
MONITORING AND BANDING AT  
BACK BAY NATIONAL WILDLIFE REFUGE AND  
FALSE CAPE STATE PARK  
REESE F. LUKEI, JR

### **Historic Background**

The Osprey (*Pandion haliaetus*) population experienced the same significant decline as other species as a result of human use of persistent pesticides such as DDT. Unfortunately there are apparently no pre-decline population surveys of Osprey population levels in Back Bay. Osprey population surveys conducted in Virginia by R.S. Kennedy in 1970-71, M.M. Smith and V.D. Stotts in 1973, and Bryan D. Watts and Mitchell A. Byrd in 1995-96 did not include Back Bay. Thus, there is no known documented population level of the Osprey in Back Bay subsequent to that conducted by the staff at Back Bay National Wildlife Refuge in 1978 and False Cape State Park in 1989 with my assistance.

### **Survey Limitations**

The surveys conducted beginning in 1989 at Back Bay NWR and False Cape SP were by boat and limited by weather conditions such as high winds, thunder storms, fog, and low water levels, and occasionally by the lack of boat transportation or mechanical failure. The surveys conducted by the staff at Back Bay NWR from 1978 to 1988 were by air.

### **Artificial Platforms and Reintroduction**

The Osprey is a species that has become dependent upon man-made structures of many types including wooden platforms, duck blinds and navigational aides. When Osprey nest on natural sites it is usually in the top of a dead tree. Nesting always occurs where they have a clear 360 degree view.

All accounts prior to 1950 describe nearly all Osprey nests to be in trees (Jones 1936, Tyrell 1936, Reese 1969). The first use of artificial nesting platforms in the Chesapeake Bay region was in the 1960's (Watts, Byrd 1996). In the early 1970's, more than 65% of Osprey were nesting on man-made structures (Henny et al. 1974). By the 1990's this portion of the population had increased to more than 90% (Watts, Byrd 1996). In 1999, the U.S. Coast Guard reported an Osprey occupation rate of 56% on day markers and 58% on light markers throughout Chesapeake Bay.

In Back Bay the first installation of an artificial platform was about 1978 on Back Bay NWR. No exact record could be found. From 1981 to 1984, the Tidewater Raptor Society (originally the Raptor Committee of the Cape Henry Audubon Society) obtained permission to install wooden platforms at Back Bay NWR and Mackay Island NWR. This effort was led by Tom Nichols, and I was a participant.

Subsequent to 1984 more wooden platforms were installed at Back Bay NWR and False Cape SP by staff and volunteers. Some platforms have been to replace those blown down or destroyed in storms.

### Survey Results 1978-1988

Staff at Back Bay NWR conducted aerial surveys beginning in 1978 through 1988. The data below is a compilation of these surveys.

<u>Year</u>	<u>Occupied Nest</u>	<u>Unoccupied Nest</u>	<u>Young Fledged</u>
1978	0	1 PL	0
1979	0	1 PL	0
1980	3 DB 2 PL	0	0
1981	2 DB 2 PL	0	1 4
1982	3 DB 4 PL	0	0 4
1983	1 DB 7 PL 1 TR	0	0 5 1
1984	0 DB 6 PL 0 TR	1 DB 3 PL	0 7
1985	0 DB 6 PL	1 DB 5 PL	0 14
1986	8 PL	4 PL	8
1987	1 DB 4 PL	0 DB 8 PL	* *
1988	*	*	*

DB – Duck Blind  
 PL – Artificial Platform  
 TR – Tree Nest  
 \* - Data incomplete

## Survey Results 1989 – 2002

From 1989 through 2002 surveys were conducted by boat at Back Bay NWR and False Cape SP by Reese F. Lukei, Jr. and staff at the refuge and park. John Gallegos, biologist at Back Bay NWR, and Chuck Butler, Chief Ranger at False Cape SP were especially helpful. As mentioned above, the results are very inconsistent due to weather conditions and the availability of a boat. Osprey banding was done by me under federal permit # 09351-H issued by U.S. Geological Survey, Biological Resources Division (1997-2002) and U.S. Fish and Wildlife Service (1989-1996).

<u>Year</u>	<u>Back Bay</u>			<u>False Cape</u>		
	<u>Nest Occupied</u>	<u>Nest Unoccupied</u>	<u>Young Banded</u>	<u>Nest Occupied</u>	<u>Nest Unoccupied</u>	<u>Young Banded</u>
1989	7	4	4	10	6	12
1990	8	3	1	*	*	0
1991	5	5	5	*	*	2
1992	4	6	6	*	*	4
1993	*	*	9	*	*	8
1994	*	*	9	*	*	1
1995	8	7	6	10	3	19
1996	9	3	9	10	4	14
1997	10	7	10	10	7	18
1998	9	7	17	11	6	20
1999	10	4	4	9	9	15
2000	9	5	7	6	8	5
2001	11	6	3	11	5	8
2002	3	12	0	6	10	3

\* - Data incomplete